



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*[Handwritten signature]*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,559	10/02/2000	Yuichi Tasaki	PNDF-00107	5156

466 7590 06/02/2004

YOUNG & THOMPSON  
745 SOUTH 23RD STREET 2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

ODLAND, DAVID E

ART UNIT PAPER NUMBER

2662

DATE MAILED: 06/02/2004

*[Handwritten mark]*

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/676,559

Applicant(s)

TASAKI ET AL.

Examiner

David Odland

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The following is a response to the amendments filed on 03/10/2004.

### *Claim Objections*

2. Claim 10 is objected to because of the following informalities:

Claim 10, in line 15, recites that the “internal cell generating section” has a first and second output. However, it appears as though the claim should recite that the ‘internal receiving section’ is what has these two outputs as shown in figure 1.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 7-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 10 recite the original user data being in a “switching format” (see line 5). It is unclear what is meant by a ‘switching format’.

Claim 7 also recites, “...at least one of an Internet protocol cell...” (see line 6). It is unclear what is meant by an “Internet protocol *cell*”. Note, data is communicated using Internet Protocol ‘*packets*’ but not ‘*cells*’.

Art Unit: 2662

Claims 7 and 10 also recites that the internal cell comprises an output index information for "...indexing the user data destination information..." It is unclear what is meant by "indexing the user data destination information". Furthermore, according to the specification the output index information is used to search the output port conversion table and not for "indexing" of the "output index information".

Claims 8,9 and 11-13 are rejected because they depend on claims 7 and 10.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 7-12, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Smith (USPN 6,349,097), hereafter referred to as Smith.

Referring to claim 7, Smith discloses a unicast/multicast system (a system for processing unicast and multicast cells (see abstract and column 10)), comprising plural data output ports connected to output toward an input side of a cross-point switch, each of the plural data output ports designated by a different output port number (a plurality of data units which can be considered output ports are connected to the input side of a cross connect switch and have numbers associated with them (see items 14 in figure 1)), an internal cell generating section that accepts an original user data in a switching format of at least one of an Internet protocol cell and

Art Unit: 2662

an asynchronous transfer mode cell (the data units of the system receive ATM cells on which are deframed, desynchronized and error checked (see figure 2 and column 8 lines 42-67)) and generates, from user data destination information within the accepted original user data, an internal cell to comprising said original user data and output index information (based on the VPI/VCI located in the cell header an indicator as to whether the cell is unicast or multicast is added to the cell header (see figure 2 and 5 and columns 8,10 and 11)) indexing the user data destination information to at least one of the plural data output ports (the VPI/VCI are used to search a look-up table to determined the proper destination ports to send the cells to (see figure 2 and column 8 lines 42-67)) and an output port conversion table storing a relationship between the output index information and the output port numbers (the look-up tables stores the ports related to the unicast and multicast cells to be switched (see figure 2 and column 8 lines 42-67 and columns 10 and 11)) in the form of one index value corresponding to one output port for the unicast and one index value corresponding to plural output ports for the multicast (the descriptor uses one value corresponding to unicasting and one corresponding to multicasting the cells (see columns 10 and 11)).

Referring to claims 8, Smith discloses the system discussed above. Furthermore, Smith discloses that said output port conversion table is a memory to an address of which the output index information is assigned (the lookup table is inherently a memory having the assigned output data units for the corresponding cells (see column 8 and figure 2)), data stored in the address being represented as a bit pattern and corresponding to an output port number (the data in the lookup table is in the form of a bit pattern wherein set bits (i.e. 1's) represent the ports that the cells are to either unicast or multicast (see columns 10 and 11 and figure 2)).

Art Unit: 2662

Referring to claim 9, Smith discloses the system discussed above. Furthermore, Smith discloses the user data destination information comprises virtual path identifier and virtual channel identifier information (the VPI and VCI are used by the system in determining the port to send the cells (see column 8 lines 27-32)).

Referring to claim 10, Smith discloses a combined unicast and multicast system (a system for processing unicast and multicast cells (see abstract and column 10)), comprising plural data output ports connected to output data toward an input side of a cross-point switch, each of the plural data output ports designated by an output port number (a plurality of data units which can be considered output ports are connected to the input side of a cross connect switch (see items 14 in figure 1)), an internal cell generating section to i) receive an original user data in a switching format (section 14 of the data unit generates cells to be stored in queue 24 (see figure 2)), and ii) generate, from user data destination information within the accepted original user data, an internal cell comprising a header field added to the original user data (using the VPI and VCI of the incoming cell, section 144 of the data unit 12 performs a look-up of where the cell is to be sent and appends to the header of the cell an indication as to whether the cell is unicast or multicast (see figures 2 and 5)), the header field comprising output port index information indexing the user data destination information to one of the output ports when the data is unicast and to plural of the output ports when the data is multicast (the data in the lookup table is in the form of a bit pattern wherein set bits (i.e. 1's) represent the ports that the cells are to either unicast or multicast (see columns 10 and 11 and figure 2)), the internal cell generating section having a first output that outputs the internal cell toward the plural data output ports and a second output that outputs the header field (section 144 of the data unit 12 sends cells toward the switch

Art Unit: 2662

and has another output to send the VPI-VCI to the look-up table 144a (note, the output to the table is not shown in the drawing)(see figure 2)) and an output port conversion section connected to i) accept the header field from the second output (the look-up table accepts the VPI and VCI in order to perform the look-up (see figure 2)) ii) extract the output port index information from the header field (the corresponding output ports are determined (see figure 2)), and iii) determine output port numbers by using the extracted output port index information as an entry to a table providing a relationship between the output port index information and the output port numbers (the VCI and VPI are used to traverse the table (see figure 2 and column 8)), wherein, entries of the table index to only one of the output ports when the data is unicast and to plural of the output ports when the data is multicast (the entries indicate whether the cell is a unicast or multicast cell (see figure 2)).

Referring to claim 11, Smith discloses the system discussed above. Furthermore, Smith discloses the plural data output ports comprise a gate section of plural gates connected to a buffer section of plural buffers (the data units act as 'gates' to the cross connect switch and have buffers in them (see figures 1 and 2)), each of the gates connected to one of the buffers, the buffers connecting to the cross-point switch (each data unit has buffers and is connected to the cross connect switch (see figures 1 and 2)), and the determined output port numbers from the table enabling selected ones of the gates to pass the original user data to the cross-point switch (depending on whether the cell is unicast or multicast determines which gates to send the cells through and on to the switch (see figures 1 and 2)).

Referring to claim 12, Smith discloses the system discussed above. Furthermore, Smith discloses that the header field further comprises an identifier indicated whether the original user

Art Unit: 2662

data is unicast or multicast, the output port conversion section extracts the identifier and, from the identifier, determines whether the original user data is unicast or multicast (a field is added to the header of the cell to indicate whether its unicast or multicast (see figure 5)).

### *Allowable Subject Matter*

7. Claims 1-6 are allowed.
8. Claim 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Response to Arguments*

9. Applicant's arguments filed 03/10/2004 have been fully considered but they are not persuasive.

In response to applicant's argument, on page 12 first paragraph regarding claim 7, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., generating an internal cell, which creates a new cell comprising the original user data and the output index information from the accepted original user data destination information from the accepted original user data and the indexing is to at least one of the plural data output ports) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Art Unit: 2662

On page 12 second paragraph the Applicant argues that Smith does not disclose a conversion table of the type recited in claim 7. The Examiner respectfully disagrees. As discussed in the above rejection of claim 7, Smith discloses an output port conversion table storing a relationship between the output index information and the output port numbers (the look-up tables stores the ports related to the unicast and multicast cells to be switched (see figure 2 and column 8 lines 42-67 and columns 10 and 11)) in the form of one index value corresponding to one output port for the unicast and one index value corresponding to plural output ports for the multicast (the descriptor uses one value corresponding to unicasting and one corresponding to multicasting the cells (see columns 10 and 11)). Thus, indeed Smith discloses the claimed invention.

### *Conclusion*

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2662

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

May 27, 2004

  
HASSAN KIZOU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600